

IN THE CLAIMS:

Please amend Claim 1 as follows.

1. (Currently Amended) An optical waveguide apparatus comprising:
 - a sheet-shaped optical waveguide capable of propagating light in two-dimensional directions;
 - a light emitting unit configured and positioned to emit ~~for emitting~~ at least two light beams in different directions to said waveguide ~~a light beam to said waveguide;~~
 - light receiving units for receiving light propagating in said waveguide;
 - at least two a light diffusing structures ~~structure~~ each of which diffuses ~~for diffusing~~ the one of the light beam beams emitted from said light emitting unit,
 - wherein said light emitting unit emits the at least two light beams in different directions within said waveguide so that each light beam is directed toward and received by a different light diffusing structure; and
 - a closed region having said light receiving units,
 - wherein each of said light diffusing structures ~~structure~~ is located closer to ~~the one of~~ the light receiving units than said emitting unit in said closed region,
 - wherein each ~~the~~ light beam emitted by said light emitting unit propagates to and is diffused in said closed region by one of said light diffusing structures ~~structure~~, ~~the light beam is diffused in said closed region by said light diffusing structure to propagate in all directions therefrom~~ ~~from the light diffusing structure~~ within the closed region, and said light receiving units are located at positions that surround ~~the~~ said at least two light diffusion structures ~~structure~~

within the closed region to receive the light diffused by said at least two light diffusing structures. structure,

2. (Previously Presented) The optical waveguide apparatus according to claim 1, wherein said light diffusing structure is constructed such that a propagation condition of light propagating in said waveguide can be changed at a place on a light propagation path between said light emitting unit and at least one of said light receiving units in a relaying manner.

3. (Canceled)

4. (Previously Presented) The optical waveguide apparatus according to claim 1, wherein said light diffusing structure has a thickness less than a thickness of a core layer of said waveguide.

5. (Canceled)

6. (Canceled)

7. (Previously Presented) The optical waveguide apparatus according to claim 1, wherein said light diffusing structure includes a structure capable of changing a propagation condition of light propagating in said waveguide without processing light in a regenerative manner by amplification and shaping.

8. (Canceled)

9. (Previously Presented) The optical waveguide apparatus according to claim 1, wherein said waveguide has a structure in which a sheet-shaped core layer is sandwiched by a first cladding layer and a second cladding layer.

10. (Canceled)

11. (Previously Presented) The optical waveguide apparatus according to claim 1, further comprising an optical-path converting structure for converting at least one light beam emitted from said light emitting unit into at least one light beam propagating in at least one predetermined direction, said optical-path converting structure being arranged in a portion of said waveguide below said light emitting unit.

12. (Original) The optical waveguide apparatus according to claim 11, wherein said optical-path converting structure has a spherical, hemispherical, conical, wedge-shaped, or polygonal pyramid-shaped structure.

13-15. (Canceled)

16. (Previously Presented) The optical waveguide apparatus according to Claim 1, wherein said light emitting unit, at least one of said light receiving units and said light diffusing structure are not located on a straight line extending along said sheet-shaped optical waveguide.